Lesson Printables

Be a rockstar and only print what you need!

Planners: 2-3		
Pictures: Sunlight: 4 Twilight: 5 Midnight: 6	**Extras** Sunlight Prompt Cards: 7 Twilight Prompt Cards: 8 Midnight Prompt Cards: 9 Challenge Cards: 10	**Answers** Sunlight: 11 Twilight: 12 Midnight: 13

**Printing in the US? Scale to 'fit to printable area' in order to get the best print.*

LESSON 1: Multiplication - Intro to equal groups

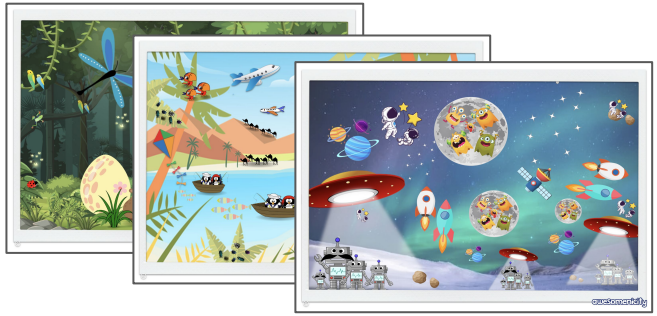
Starter	Main Activity and Input: Using pictures to identify equal groups and matching number sentences.	Plenary
Charlie's Change Up: What amount can be added to the place value blocks in order to make 3,432? **To support:** 1. Ask students what number is being shown using the place value blocks. If they know the block total Charlie wants and the amount he currently has, what number sentence could help students work out the answer? **To challenge:** 1. How can students prove if their answer is correct? 2. What are some other ways students can make 3,432?	**Input:** 1. Slide 6 asks students if they can see any equal groups in the picture of flowers and bees. What number sentences could match their thinking? Can students use more than one operation? Slide 7 explicitly shows the different equal groups that can be found. For example, 5 bees x 2 flowers, 2 flowers x 2 leaves, etc. 2. Slide 8 explains more explicitly how multiplication is connected to addition. The multiplication number sentences 5 x 2 (5 bees in a group, 2 groups in total) or 2 x 5 (2 groups of flowers with 5 bees on each flower) can be written as the repeated addition number sentence 5 + 5. We have also included a tape diagram to match. Note, in this scenario, we are avoiding the number sentence 2 + 2 + 2 + 2 + 2 due to the fact that it doesn't match the picture of the bees. Your students might point this out and it could be a discussion point in your class. In future lessons, when we inquire into skip counting, we will explore making two addition problems from a multiplication number sentence. 3. Slide 9 repeats the process of looking for equal groups by exploring a winter scene. How many number sentences can children spot? This models the main activity of the lesson. Ask students to share their thinking on the board. Slide 10 reveals three possible solutions. 4. Slide 11 asks students what 3 groups of 4 might look like. Students could draw a picture or group items from the classroom in order to demonstrate their understanding. Slide 12 shows one possible solution. **Activity: 'I Spy' picture statements.** 1. Print the different picture scenes for each learning zone. Students could work in small groups to look for equal groups hidden within the pictures. Students should write down the number sentences that match their findings. For example, if students spot 3 moons with 5 aliens on each moon, their number sentences could be 3 x 5 = 15 , 5 x 3 = 15 and 5 + 5 + 5. We have provided optional question prompts for students who might need a more structured approach. **To support:** 1. Encourage students to use blocks or counters to physically create a copy of the groups they've spotted in order to reinforce repeated addition and multiplication. **To challenge:** 1. Ask students to write the answers to their number sentences. They could also draw tape diagrams to match their thinking. 2. Students could use the challenge cards (or make up their own!) to make their own multiplication mystery pictures.	**Group 'em Up:** Can students organise themselves into different equal groups? (Students should lead the grouping.) **Check for understanding:** 1. Can students identify ways to put themselves into equal groups? You could put students into small groups and they could explore how many different ways they can group themselves equally. For example, students could be put in groups of 6 and then create 2 groups of 3, 3 groups of 2, etc.

Things that might be useful for this lesson:

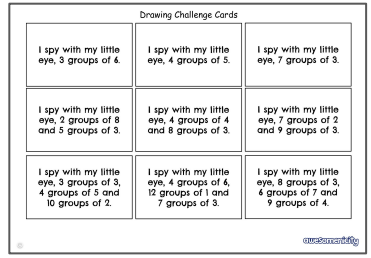
- Individual whiteboards:
  - ➔ Help students to record their thinking and share ideas with others.
- Counters/blocks:
  - ➔ Help students to form groups and create number sentences.
- Recording logs:
  - ➔ Help students to organise their thinking steps and create their number sentences.

Peek at the Printables:

Pictures

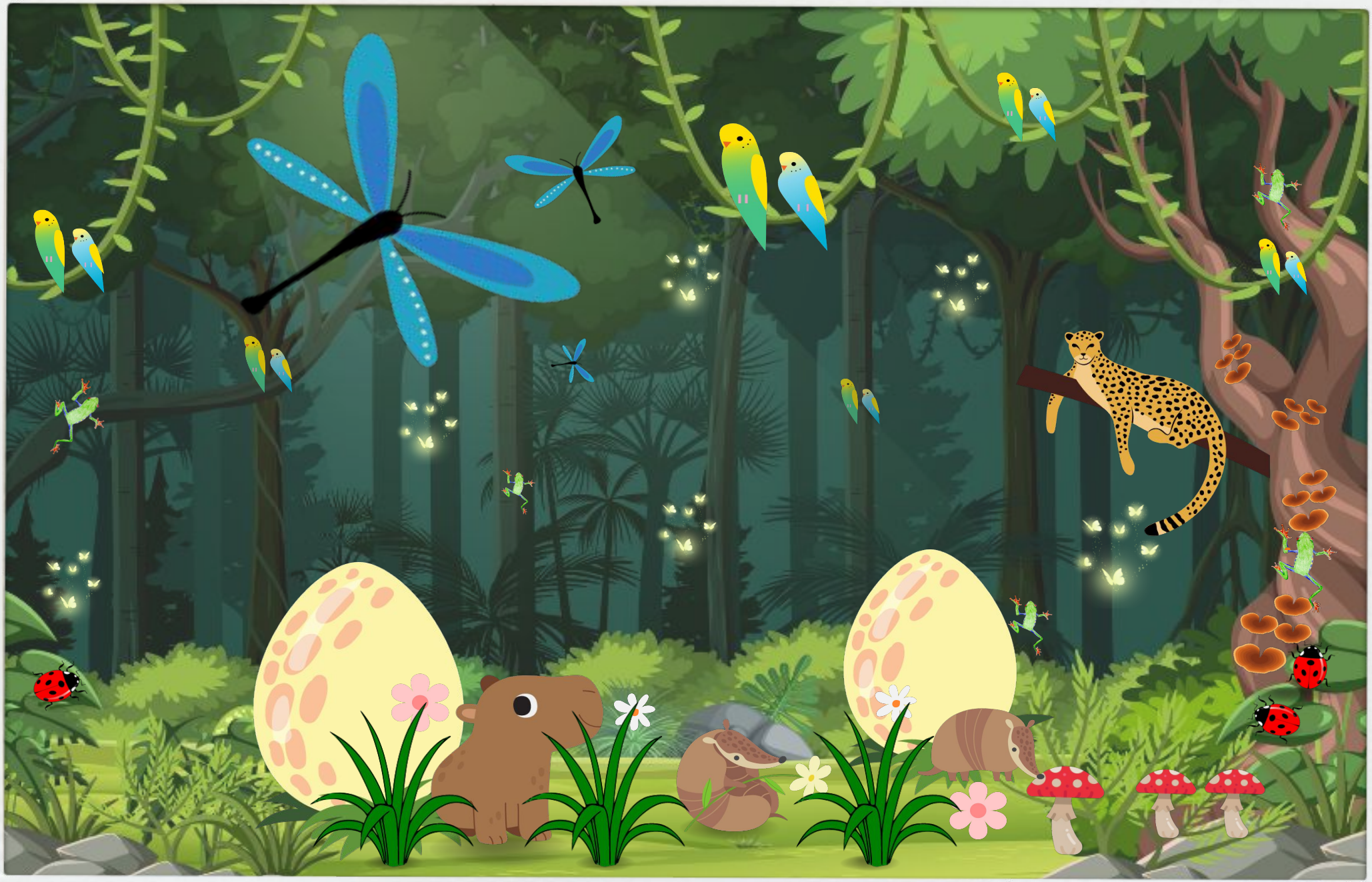


Challenge Cards



Greener Alternatives:

- ➔ Create your own equal group collections in stations around the class. Students could move from station to station to create their number sentences.
- ➔ Students could draw quick pictures to swap with a partner to use to find number sentences.
- ➔ You could print a couple of copies of the challenge cards and display them around the class for students to refer to when needed.



Space Picture Prompts

How many space rockets?	How many robots?	How many white stars?
How many planets?	How many astronauts?	How many flying saucers?
How many rocks?	How many moons?	How many windows on the satellite?

Tropical Picture Prompts

How many red parrots?	How many beetles?	How many penguin feet?
How many penguins fishing?	How many bows on the kites?	How many passenger windows on the planes?
How many fish?	How many camels?	How many camel legs?

Forest Picture Prompts

How many birds?	How many glowing butterflies?	How many spots on the eggs?
How many spots on the mushrooms?	How many brown fungi?	How many green leaves like the one below? 
How many frog legs?	How many ladybug spots?	How many legs in total?

Drawing Challenge Cards

I spy with my little eye,
2 groups of 6.

I spy with my little eye,
4 groups of 5.

I spy with my little eye,
5 groups of 3.

I spy with my little eye,
2 groups of 8 and 3
groups of 3.

I spy with my little eye,
4 groups of 4 and 8
groups of 3.

I spy with my little eye,
7 groups of 2 and 4
groups of 3.

I spy with my little eye,
3 groups of 3,
4 groups of 5 and
10 groups of 2.

I spy with my little eye,
4 groups of 6,
12 groups of 1 and
7 groups of 3.

I spy with my little eye,
8 groups of 3,
6 groups of 7 and
9 groups of 4.

Space Answers

Below are answers to the optional picture prompts.

How many space rockets?
2 groups of 2 rockets.
2 x 2 = 4
2 + 2

How many robots?
3 groups of 4 robots.
3 x 4 = 12 or 4 x 3 = 12
4 + 4 + 4

How many white stars?
10 stars in a constellation.
2 constellations in total.
2 x 10 = 20 or 10 x 2 = 20
10 + 10

How many planets?
3 groups of 3 planets.
3 x 3 = 9
3 + 3 + 3

How many astronauts
2 astronauts in a group.
4 groups in total.
2 x 4 = 8 or 4 x 2 = 8
2 + 2 + 2 + 2

How many flying saucers?
3 lots of flying saucers.
1 saucer in a group.
1 x 3 = 3 or 3 x 1 = 3
1 + 1 + 1

How many rocks?
3 lots of rocks.
2 rocks in a group.
2 x 3 = 6 or 3 x 2 = 6
2 + 2 + 2

How many aliens?
5 aliens on a moon.
3 moons in total.
5 x 3 = 15 or 3 x 5 = 15
5 + 5 + 5

How many windows on the satellite?
2 groups of windows.
8 windows in a group
2 x 8 = 16 or 8 x 2 = 16
8 + 8

Tropical Answers

Below are answers to the optional picture prompts.

How many red parrots?
3 parrots on a leaf.
2 leaves in total.
2 x 3 = 6 or 3 x 2 = 6
3 + 3

How many beetles?
3 groups of beetles.
7 beetles in a group.
3 x 7 = 21 or 7 x 3 = 21
7 + 7 + 7

How many penguin feet?
8 penguins with 2 feet each.
2 x 8 = 16 or 8 x 2 = 16
2 + 2 + 2 + 2 + 2 + 2 + 2 + 2

How many penguins fishing?
4 boats with 2 penguins
in each boat.
4 x 2 = 8 or 2 x 4 = 8
4 + 4

How many bows
on the kites?
3 kites with 4 bows on each kite.
3 x 4 = 12 or 4 x 3 = 12
4 + 4 + 4

How many passenger windows on the planes?
4 airplanes with 6 passenger windows on each plane.
4 x 6 = 24 or 6 x 4 = 24
6 + 6 + 6 + 6

How many fish?
4 groups of fish with
4 fish in each group.
4 x 4 = 16
4 + 4 + 4 + 4

How many camels?
3 groups of 6 camels.
3 x 6 = 18 or 6 x 3 = 18
6 + 6 + 6

How many camel legs?
18 camels with 4 legs each.
4 x 18 = 72 or 18 x 4 = 72
18 + 18 + 18 + 18
(Students are not required to solve this, but could be encouraged to used repeated addition to get the answer.)

Forest Answers

Below are answers to the optional picture prompts.

How many birds?
6 groups of birds.
2 birds in a group.
6 x 2 = 12 or 2 x 6 = 12
2 + 2 + 2 + 2 + 2 + 2

How many glowing butterflies?
6 butterflies in a group.
6 groups in total.
6 x 6 = 36
6 + 6 + 6 + 6 + 6 + 6

How many spots
on the eggs?
2 eggs. 17 spots on each egg.
2 x 17 = 34 or 17 x 2 = 34
17 + 17

How many spots
on the mushrooms?
3 mushrooms with 6 dots on each mushroom.
3 x 6 = 18 or 6 x 3 = 18
6 + 6 + 6

How many brown fungi?
4 groups with 4 in each group.
4 x 4 = 16
4 + 4 + 4 + 4

How many green leaves like the one below?
3 plants (in the foreground) with 9 'leaves' on each plant.
3 x 9 = 27
9 + 9 + 9

How many frog legs?
5 frogs with
4 legs on each frog.
5 x 4 = 20 or 4 x 5 = 20
4 + 4 + 4 + 4 + 4

How many ladybug spots?
7 spots on a ladybug.
3 ladybugs in total.
7 x 3 = 21 or 3 x 7 = 21
7 + 7 + 7

How many legs in total?
3 dragonflies 3 x 6 = 18
12 birds 2 x 12 = 24
5 frogs 5 x 4 = 20
3 ladybugs 3 x 6 = 18
4 mammals 4 x 4 = 16
96 legs in total